

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in light of the present amendments and following discussion, is respectfully requested.

Applicants appreciate the courtesies extended to applicant's representatives during the personal interview. Applicant's statements of substance of the personal interview are incorporated in the present remarks and therefore constitute applicants record of the interview.

Claims 1 and 3-10 are pending; Claims 1 and 3 are amended; Claim 10 is added; and no claim is canceled herewith. It is respectfully submitted that no new matter is added by this amendment.

In the outstanding Office Action, Claims 1 and 6-9 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 6,619,102 to Salou; Claims 3 and 4 were rejected under 35 U.S.C. § 103(a) as unpatentable over Salou in view of U.S. Patent No. 6,471,407 to Katano; and Claim 5 was rejected under 35 U.S.C. § 103(a) as unpatentable over Salou in view of Katano and further in view of U.S. 2004/0123677 to Omata. These rejections are respectfully traversed.

The applied art does not teach or suggest that the hub unit has a sensor that is affixed to the curved base end part of the flange portion for detecting the amount of deformation of the location and processing means for determining a ground contact load from the output of the sensor, as claimed in Claim 1. Additionally, the applied art does not teach or suggest that the sensor is a displacement sensor supported by a support member that extends axially from one of the cylindrical portion of the body-side raceway member and the flange portion thereof for detecting the distance between the displacement sensor and the other portion, as recited in Claim 3 and similarly recited in Claim 10 having the support member extending radially from the cylindrical portion.

Instead, Salou discloses as best shown in Figure 1, a bearing 1 which includes an outer raceway 2 and a rotating inner raceway 3 with rolling bodies therebetween. In order to fix bearing 1 to a fixed structure, the fixed raceway 2 includes a flange 14 made in one piece, extending radially to at least part of the circumference of bearing 1. The flange 14 includes four first radial projections 22, 23, 24 and 25 in which holes 18 are provided and forms the first fixing means 5. Additionally, the flange comprises hollow zones 19, 20 and 21 whose radial and/or axial dimensions are less than the radial or respective axial dimensions of the first projections 22, 23, 24 and 25. In order to measure the deformations of bearing 1, at least one sensor 26 is associated with at least one or all of the elastic deformation zones 19, 20 and 21. The projections 32 and 33 each comprise at least one elastic deformation zone that includes a sensor 26. Accordingly, as shown in Figure 1 of Salou, a sensor 26 is shown at elastic deformation zone 19, and a sensor 26 is shown at the second projection 33.

In contrast, according to the claimed invention, the sensor is affixed to the curved base end part of the flange portion. Further, Claim 3 recites that the sensor is supported by a support member that extends axially from one of the cylindrical portion of the body-side raceway member and the flange portion. Claim 4 recites that the sensor is supported by a support member that extends radially from the cylindrical portion of the body-side raceway member. These features are not taught or suggested in Salou. Because the remaining applied art is not relied upon to provide the feature identified as deficient in Salou, they are not substantially addressed herewith.

The position of the sensor provides information regarding the impact on the amount of deformation (strain) obtained from the sensor. That is, according to one or more exemplary embodiments of the present invention, the advantageous effect is that sensitivity of the sensor is improved to a large degree because the sensor is provided in a position where a large amount of deformation can be obtained. None of the applied art discloses the features

of the claimed invention discussed above, and therefore cannot provide at least the advantages discussed above.

Moreover, it is respectfully submitted that there is no basis in the teachings of any of Salou, Kitano, or Omata to support the applied combinations. Certainly, the outstanding Office Action fails to cite any specific teachings within any of these references to provide motivation for the combination herein. Accordingly, it is respectfully submitted that the combination of Salou, Kitano, and Omata is the result of hindsight reconstruction in view of the present specification, and is improper.

Consequently, in view of the foregoing discussion and present amendments, it is respectfully submitted that this application is in condition for allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

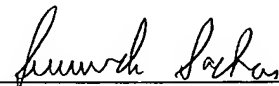
OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)

GJM:KMM\dt
I:\ATTY\KMM\253736US-AM.DOC



Gregory J. Maier
Attorney of Record
Registration No. 25,599

Kevin M. McKinley
Registration No. 43,794

Surinder Sachar
Registration No. 34,423